

# The Avogadro Group, LLC

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October 19, 2007

Mr. Charlie Knight Plant Manager Burney Mountain Power Hwy 299 & Energy Drive Burney, CA 96013

Phone No.: (530) 335-5434, Ext. 14

Fax No.: (530) 335-5522

Subject: 2007 Relative Accuracy Test Audit (RATA) Report 07097m

Dear Mr. Knight:

Enclosed please find four copies of the test report for the above-referenced project. As you requested, Mr. Jeff Hahn of Covanta has reviewed and approved the report on October 18. Please forward one copy of the report to Mr. John Waldrop of the Shasta County Air Quality Management District by October 26, 2007. Mr. Waldrop's address is presented below:

Mr. John Waldrop Senior Air Pollution Inspector Shasta County AQMD 1855 Placer St, Suite 101 Redding, CA 96001-1759

Mr. Hahn requested that we perform a relative accuracy test audit (RATA) on the plant-calculated CO<sub>2</sub> values during this test program. As you are aware, the plant's CEMS does not monitor CO<sub>2</sub> concentrations; rather, these values are calculated based on the O<sub>2</sub> concentrations (from the CEMS) and F-factors (refer to Section 2.1 of the report). The CO<sub>2</sub> RATA was performed by comparing the plant-calculated CO<sub>2</sub> concentrations with the CO<sub>2</sub> concentrations that Avogadro monitored throughout the test intervals. The relative accuracy of BMP's calculated CO<sub>2</sub> values was 0.61% (absolute difference), well within the performance specification of 1%. The results of the RATA are presented in Table 1 and the supporting data are presented in the attachments.

TABLE 1
RELATIVE ACCURACY TEST RESULTS
BMP-CALCULATED CO<sub>2</sub> CONCENTRATIONS, % VOLUME DRY

Run Number	Date	Time	Avogadro CEMS	Plant CEMS	Difference	
Run 1	9/11/07	0920-0944	14.29	13.65	0.640	
Run 2	9/11/07	0953-1017	14.14	13.55	0.585	
Run 3	9/11/07	1032-1056	14.15	13.65	0.501	
Run 4	9/11/07	1105-1129	14.18	13.65	0.532	
Run 5	<del>9/11/07</del>	<del>1140-120</del> 4	<del>14.2</del> 4	<del>13.27</del>	<del>0.977</del>	
Run 6	9/11/07	1214-1238	14.17	13.55	0.622	
Run 7	9/11/07	1250-1314	14.33	13.74	0.593	
Run 8	9/11/07	1323-1347	14.25	13.65	0.603	
Run 9	9/11/07	1356-1420	14.44	13.84	0.602	
Run 10	9/11/07	1430-1454	14.43	13.74	0.689	
AVERAGES:			14.26	13.67	0.60	
STANDARD D	EVIATION:				0.055	
CONFIDENCE					0.042	
ABSOLUTE DIFFERENCE %:						

Charlie, it has been a pleasure working with you and your helpful staff again at BMP. You are an important client to us at The Avogadro Group, LLC, and we appreciate your support. Please call me at (541) 665-0170 if you have any questions or comments regarding this report. Thank you for the opportunity to serve BMP.

Sincerely,

The Avogadro Group, LLC

leffery M. Hogan Project Manager

cc: Jeff Hahn, Covanta (letter)

Enclosures (4)



### **ATTACHMENTS**



# Gaseous Emission Test Results

# BMP Wood Boiler

Test number	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Run 10
DateStart / Stop time	9/11/07 0920-0944	9/11/07 0953-1017	9/11/07 1032-1056	9/11/07 1105-1129	9/11/07 1140-1204	9/11/07 1214-1238	9/11/07 1250-1314	9/11/07 1323-1347	9/11/07 1356-1420	9/11/07 1430-1454
O2, % volume dryCO2, % volume dry	6.191	6.371 14.14	6.334 14.15	6.264	6.175	6.291 14.17	6.151 14.33	6.259 14.25	6.070 14.44	6.111 14.43
BMP-Calculated CO2 (% volume dry)	13.65	13.55	13.65	13.65	13.27	13.55	13.74	13.65	13.84	13.74

# RELATIVE ACCURACY DETERMINATION BMP

## CO2, % volume dry

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Run#	<u>Date</u>	<u>Time</u>	<u>AG</u>	<u>CEMS</u>	<u>Difference</u>	<u>n</u>	<u>t(0,975)</u>
Run 1	9/11/07	0920-0944	14.29	13.65	0.640	1	100.00
Run 2	9/11/07	0953-1017	14.14	13.55	0.585	2	12.706
Run 3	9/11/07	1032-1056	14.15	13.65	0.501	3	4.303
Run 4	9/11/07	1105-1129	14.18	13.65	0.532	4	3.182
Run 5	<del>9/11/07</del>	<del>1140-120</del> 4	<del>14.2</del> 4	13.27	0.977	<del>5</del>	<del>2.776</del>
Run 6	9/11/07	1214-1238	14.17	13.55	0.622	6	2.571
Run 7	9/11/07	1250-1314	14.33	13.74	0.593	7	2.447
Run 8	9/11/07	1323-1347	14.25	13.65	0.603	8	2.365
Run 9	9/11/07	1356-1420	14.44	13.84	0.602	9	2.306
Run 10	9/11/07	1430-1454	14.43	13.74	0.689	10	2.262
AVERAG	ES:		14.26	13.67	0.60		
STANDA	RD DEVIATIO	N:			0.055		
CONFIDE	ENCE COEFFIC	CIENT:			0.042		
RELATI	VE ACCURA	CY (BASED C	N ABSOLU	J <b>TE DIFFEI</b>	RENCE), %:		0.60